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VII SIMPÓSIO SOBRE A

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VII SYMPOSIUM ON THE

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reveals an ongoing Pleistocene uplift that should be correlated with offshore structures.

Palavras chave: Quaternário, terraços marinhos, soerguimento, tectónica activa, Portugal.
***Keywords**: Quaternary, marine terraces, uplift, active tectonics, Portugal.*

A Bottom Sediment Distribution Map for the Portuguese Continental Shelf in ArcGis Format

Mapa da Distribuição de Sedimentos Superficiais da Plataforma Continental Portuguesa em Formato ArcGis

A. J. F. Silva (1), M. R. Azevedo (1), R. Martins (2), R. Mamede (2), F. Ricardo (2), L. Magalhães (2), P. Monteiro (3), L. Bentes (3), J. M. S. Gonçalves (3), V. Quintino (2), A. M. Rodrigues (2), R. Freitas (2)

(1) Departamento de Geociências & GEOBIOTEC, Universidade de Aveiro, 3810-193 Aveiro, Portugal. antoniojsilva@ua.pt
(2) Departamento de Biologia & CESAM, Universidade de Aveiro, 3810-193 Aveiro, Portugal.
(3) CCMAR, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, Portugal.

This work presents a simplified map of the spatial distribution of surficial sediments and rock outcrops along the Portuguese continental shelf in ArcGIS format. Preliminary map preparation involved scanning, georeferencing and digitizing of pre-existing base maps from the Portuguese Hydrographic Institute and harmonization with other published and non-published cartographic information. Samples of soft bottom shelf sediments from nearly 500 sites, collected in the scope of the MeshAtlantic, RENSUB and ACOSHELF projects, were analyzed for grain-size and total organic matter. Grain-size analysis was performed using dry and wet sieving. The procedure includes chemical destruction of organic matter with H_2O_2, chemical dispersion with tetra-sodium pyrophosphate, separation of the mud fraction by wet sieving and dry sieving of both sand and gravel fractions. Raw grain-size data were expressed as weight percentages and classified according to a modified version of the Folk classification system. Grain size data for the whole set of samples were used to create a new sediment distribution map and develop an easy-to-use GIS interface, that will be available in the MeshAtlantic website, as part of a global broad scale habitat map for the Atlantic Area.

Overall, the bottom sediment distribution patterns show that: (a) the coarser deposits occur mainly in the inner and mid-shelf of the northwestern sector of the Portuguese shelf, to the south of the Nazaré and Setúbal canyons, and are sparsely represented in the southern shelf; (b) sand banks dominate in the near shore shelf, but can sporadically be found at greater depths; (c) muddy sands characterize the deeper shelf; (d) patches of sandy mud and mud reflecting a less energetic hydrodynamic regime cover a large sector of the southern shelf and areas located off the mouths of major rivers in the western shelf; (e) mixed sediments are residual; (f) rock outcrops are unevenly distributed throughout the entire shelf.

Palavras chave: sedimentos marinhos, classificação de Folk, ArcGIS software.
***Keywords**: marine sediments, Folk classification shelf, ArcGIS software.*

Active faulting in the SW Iberian Margin based on high-resolution seismic imaging (SWIM-2006)

Fallas activas en el Margen SO Ibérico basado en imágenes sísmicas de alta resolución (SWIM-2006)

S. Martínez-Loriente (1), E. Gràcia (1), R. Bartolomé (1), C. Connors (2), V. Sallarès (1), H. Perea (1), C. Lo Iacono (1,3), D. Klaeschen (4), P. Terrinha (5), N. Zitellini (6), J. Dañobeitia (1)

(1) Unidad de Tecnología Marina-CSIC, Pg. Marítim de la Barceloneta 37-49, 08003, Barcelona, Spain. smartinez@cmima.csic.es
(2) Dept. of Geology, Washington and Lee Univ., 204 W. Washington St., Lexington, VA 24450, USA.
(3) Marine Geosciences, NOC, Southampton, European Way, Southampton SO14 3ZH, United Kingdom.
(4) IFM-GEOMAR, Wischhofstr. 1-3, 24148, Kiel, Germany.
(5) LNEG, Unidade de Geologia Marinha, Estrada da Portela, 7586, 2720-866 Amadora, Portugal.
(6) Istituto Scienze Marine CNR, Sezione Geologia Marina, 40129, Bologna, Italy.

The external part of the Gulf of Cadiz is an area of widespread interest where large historical and instrumental earthquakes, such as the 1755 Lisbon Earthquake (MW 8.5) and the 1969 Horseshoe Earthquake (MW 8.0), have nucleated. The NW-SE convergence of the African and Eurasian Plates controls the high seismic activity of moderate magnitude that characterizes the region. Multi-scale acoustic and seismic reflection profiles acquired on the external part of the Gulf of Cadiz during the SWIM-2006 survey reveal active faulting and folding affecting the pre-existing structures formed during the Jurassic/Cretaceous rifting. The present study focuses on the characterization of the tectonic pattern and timing of deformation associated to the structures located south from 36°30'N. This region embraces a prominent NE-SW trending structure, the Coral Patch Ridge (CPR), which is bounded by the Horseshoe and Seine abyssal plains (HAP, SAP). E-W trending dextral strike-slip faults showing surface deformation and flower structure geometry predominates across the HAP, whereas NE-SW-trending thrust faults characterize the structures of the CPR and SAP. Using acoustic and multi-scale seismic data, we show that